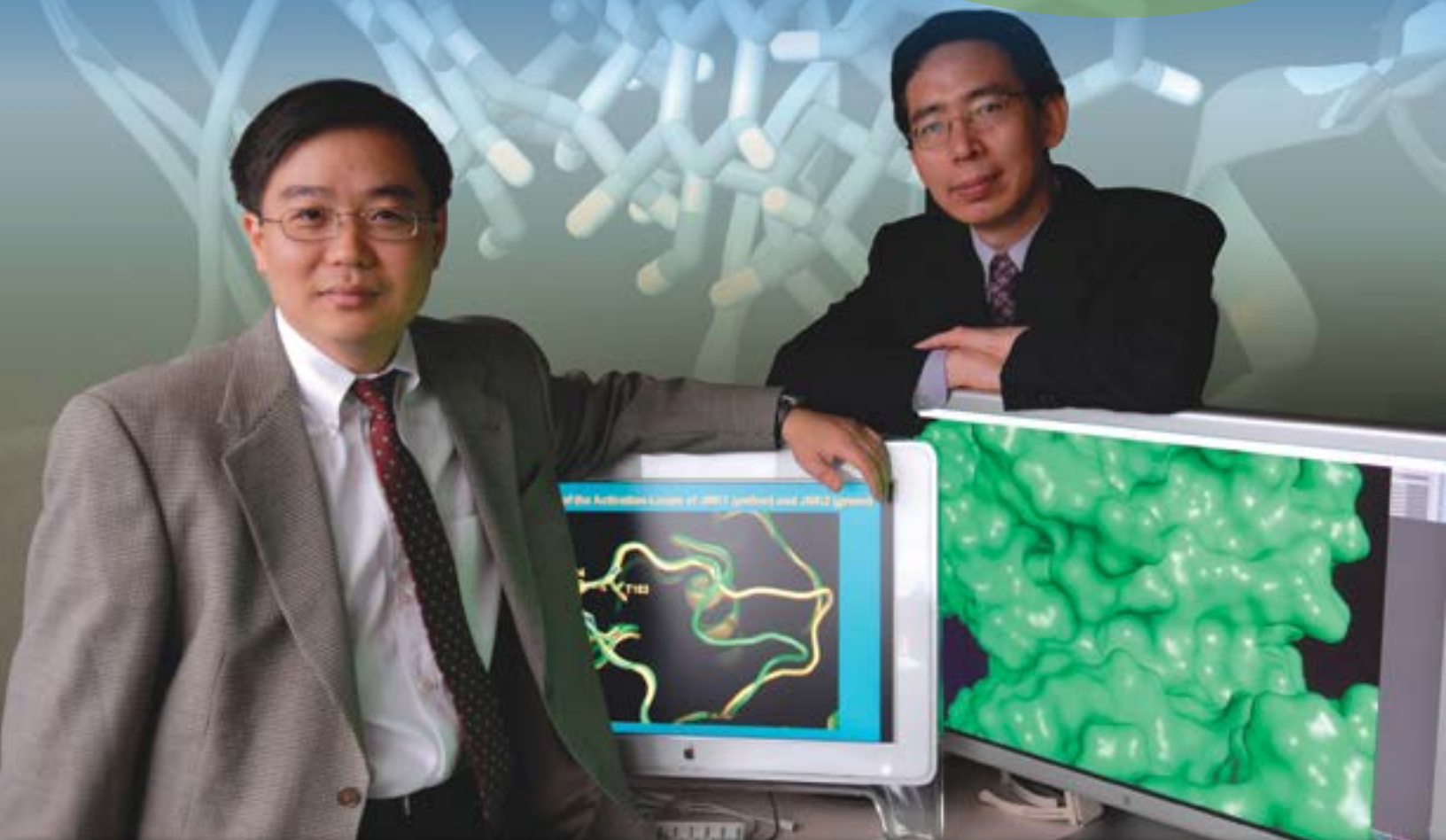


Minnesota

The Perfect Environment for Bioscience



MINNESOTA LEADS THE WAY IN:

- MEDICAL DEVICES
- ANIMAL SCIENCE
- BIO-AGRICULTURE AND FOOD
- BIOMATERIALS AND BIOFUELS
- PHARMA AND BIOLOGICS

Minnesota

Department of Employment and Economic Development

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The Perfect Environment for Bioscience

Minnesota is well recognized as a leader in the biosciences, particularly due to the presence of the internationally renowned Mayo Clinic and the University of Minnesota.

Minnesota consistently ranks among the top in key life science indicators. Minnesota has a large, specialized bioscience industry base with more than 48,000 jobs, ranking in the top quintile for total bioscience employment, according to the Battelle/BIO State Bioscience Initiatives report (2012). Minnesota was one of seven states that gained more than 5,000 jobs in bioscience industries between 2001-2010.

From our traditional strength in medical devices to emerging bioscience sectors, Minnesota offers what your bioscience business needs to thrive. What's our formula for success?

- Highly educated workforce
- Extraordinary support network for bioscience
- Attractive Angel Loan Fund and Angel Tax Credit
- Vibrant metropolitan area

Medical Devices

Minnesota has a long-established reputation as a medical technology pioneer dating back to the 1940s.

- Minnesota has nearly four times the concentration of employment in medical device manufacturing industries compared to the nation as measured by location quotients — ranking first nationwide.
- Minnesota ranks first in the Midwest — second nationwide — in medical device manufacturing employment with 28,859 workers (2012).
- Minnesota added the third-largest number of workers (2,220) in the nation in medical device manufacturing industries between 2005-2012.

Minnesota's largest medical device manufacturing firms by employment are:

- Medtronic
- Starkey Laboratories, Inc.
- Boston Scientific
- Lake Region Manufacturing, Inc.
- 3M Health Care
- St. Jude Medical

Patents alone tell an important part of the story:

- Minnesota ranks no. 1 nationwide in medical patents per capita (2012)
- Minnesota ranks no. 2 in overall medical patents (3,520) between 2008-2012

Minnesota's largest share of venture capital investment has been consistently targeted toward medical technologies in recent years. Nearly 60 percent of all venture capital investments in the state (\$160 million) went to medical device companies in 2013. Minnesota companies have more than 750 registrations in medical devices with the U.S. Food and Drug Administration (2014).



Animal Science

Minnesota's strength in animal science is reflected in top rankings in livestock and livestock products nationwide, according to the U.S. Department of Agriculture and the National Agriculture Statistics Service (2012). We rank:

- 1st in turkeys raised
- 3rd in hogs and pigs
- 6th in red meat production
- 6th in milk cows, and
- 7th in milk production

Top companies by employment include:

- Cargill Animal Nutrition and Feed (animal feeds)
- CHS Animal Nutrition (animal feeds)
- Land O' Lakes Purina Feed LLC (animal feeds)
- Bimeda (animal health products)
- Newport Laboratories (animal diagnostic testing)
- EpiTopix LLC (veterinarian vaccines)

The smaller firms of Babcock Genetics and Nova-Tech Engineering offer swine genetics services and hatching technology services, respectively.

Minnesota's postsecondary institutions granted more than 455 degrees in farm and ranch management and animal health-related fields (2011-2012). The University of Minnesota's College of Veterinary Medicine ranks among the top 10 veterinary schools in the country, according to U.S. News & World Report (2011).



Bio-Agriculture & Food

Minnesota has a long tradition of innovation in food production and is one of the top producers of food in the nation. We're the nation's no. 1 processor of sweet corn and no. 2 of green peas. Minnesota ranks first in sugar beets and oats production. And it is the nation's fourth-largest exporter of agricultural goods (\$8.2 billion), according to the U.S. Department of Agriculture (2012).

Five of the 18 Fortune 500 companies in Minnesota have operations in food and beverages production and distribution (2013):

- SuperValu
- CHS
- General Mills
- Land O'Lakes and
- Hormel Foods

Top food manufacturing firms by employment are:

- Schwan Food Company
- Cargill
- Bellisio Foods
- Golden Plump Poultry, Inc.
- Quality Pork Processors, Inc.
- General Mills
- Mom's Brands
- Land O'Lakes
- Hearthside Food Solutions
- Hormel Foods
- JBS Swift



Biomaterials/Biofuels

Minnesota is changing the way the country produces and consumes food and energy products. Minnesota was the first in the country to require a five percent biodiesel blend in most diesel fuels. The state ranks no. 1 in the number of gas pumps (314) offering E85 (2014) and no. 4 in ethanol production capacity with 1,014 million gallons (2013). Fibrominn Biomass Power Plant, the country's first operating poultry litter plant, produces 55 megawatts annually of carbon-neutral renewable energy to power about 40,000 homes.

Top biomaterials and biofuels companies in Minnesota include:

- Cargill
- 3M
- Advanced BioEnergy LLC
- Highwater Ethanol LLC
- Minnesota Soybeans Processors
- Green Plains
- Valero Renewable Fuels LLC
- Granite Falls Energy LLC
- Gevo
- NatureWorks
- Fibrominn
- StarchTech, Inc.
- Poet
- Guardian Energy
- ADM
- CHS

Pharma/Biologics

Minnesota has a growing number of companies and researchers that focus on everything from human health microbiology and medical genomics to proteomics and stem cell research. U.S. News & World Report ranks the graduate program at the University of Minnesota's College of Pharmacy third in the country (2012).

Top pharma/biologics companies in Minnesota by employment are:

- 3M Drug Delivery Systems
- Abbott Laboratories
- R&D Systems (Bio-Techne)
- Paddock Laboratories
- Pfizer
- Lifecore Biomedical
- Amerilab Technologies
- Upsher-Smith
- Medical Graphics Corp.
- Smartract
- ANIP Acquisition Company
- Newport Laboratories
- SurModics
- CIMA Labs

Minnesota's bioinformatics powerhouse includes nearly 20 institutions and programs with top faculty members and state-of-the-art technology, including:

- BioMedical Genomics Center, University of Minnesota
- Center for Mass Spectrometry and Proteomics, University of Minnesota
- Computational Genetics Laboratory, University of Minnesota
- Hormel's International Center for Research Technology, University of Minnesota-Mayo Clinic
- Stem Cell Institute, University of Minnesota



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